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Docket No. SUN-DA-106T
Serial No. 10/676,643Remarks

Claims 2, 3, and 5-10 were pending in the subject application. By this Amendment, claims 2, 3, 5, and 6 have been amended and claims 9 and 10 have been canceled. In particular, claim 2 has been amended to recite "a slurry measuring unit to analyze the cross-sectional image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry across the cross-section of the by-pass;" claim 5 has been amended to recite "analyzing the cross-sectional image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry across the cross-section of the by-pass;" and claims 3 and 6 have been amended to return the term "ingredients" to the original term "composition." Support for the amendments to claims 2 and 5 can be found, at least, at paragraphs [0018]-[0019]. No new matter has been introduced by these amendments. Upon entry of these amendments, claims 2, 3, and 5-8 will be before the Examiner. Favorable consideration of the pending claims is respectfully requested.

The specification has been objected to for replacing the term "composition" with "ingredients." Although Applicant disagrees with this objection, the specification has been amended to recite "composition." Furthermore, the term 'composition' in the context of the original specification is definite. In particular, a person having ordinary skill in the art would understand the phrase "the diluent solution is pure water or a solution with the same composition as the slurry solution" to mean that the diluent solution must be either pure water, or a solution having the same components as the slurry solution, but in more dilute form. In fact, this is the only possible interpretation.

The rejections of Claims 3 and 6 under 35 U.S.C. § 112, first paragraph, and 35 U.S.C. § 112, second paragraph, have been obviated by the above amendment. As discussed above, the term "composition" in the context of the original specification would be understood by a person having ordinary skill in the art.

The rejection of claims 9 and 10 under 35 U.S.C. § 112, second paragraph has been rendered moot by the cancellation of claims 9 and 10.

Claims 2, 3, and 5-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kondo *et al.* (U.S. Pat. App. No. 2002/0061722) in view of Grant *et al.* (U.S. Pat. App. No. 2003/0174306). Applicant respectfully traverses. As discussed above, claim 2 has been amended to recite "a slurry

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measuring unit to analyze the cross-sectional image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry across the cross-section of the by-pass,” and claim 5 has been amended to recite “analyzing the cross-sectional image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry across the cross-section of the by-pass.”

The Office Action states at page 4 that Kondo *et al.* discloses an apparatus to control slurry flow in a chemical mechanical polishing apparatus comprising “a photo image sensor (7) to detect a generally cross-sectional image of the slurry flowing in the by-pass, a slurry measuring unit (arithmetic processing unit; paragraph 48) to analyze the image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry.”

However, Kondo *et al.* and Grant *et al.*, alone or in combination, fail to teach or suggest a photo image sensor detecting a generally cross-sectional image of slurry flowing in the by-pass, and then using a slurry measuring unit to analyze the image captured by the photo image sensor. In particular, Kondo *et al.* teaches that the particle detector is a light-extinction type and adapted for irradiating a predetermined quantity of light on a flow cell fitted in the by-pass conduit so as to detect an attenuation of the light transmitted through the polishing solution flowing through the flow cell (*see* Kondo *et al.* at Fig. 2 and paragraphs [0011], [0015], and [0018]).

Furthermore, the particle detector 7 of Kondo *et al.* includes a light detecting device such as a photodiode for detecting an intensity of the light emitted from the light source 72 and transmitted through the flow cell 74 (*see* Kondo *et al.* at paragraph [0048]). Therefore, the particle detector 7 of Kondo *et al.* does not analyze the cross-sectional image captured by the photo image sensor to measure the sizes of particles included in the slurry and the density of the slurry across the cross-section of the by-pass. Grant *et al.* does not cure these defects.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the §103(a) rejection of claims 2, 3, and 5-8.

In view of the foregoing remarks and amendments to the claims, Applicant believes that the currently pending claims are in condition for allowance, and such action is respectfully requested.

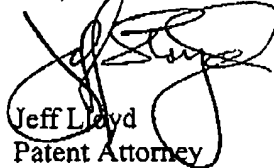
The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 or 1.17 as required by this paper to Deposit Account 19-0065.

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Applicant invites the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,


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